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Centre-periphery gradient in clutch quality when subcolonies are present within a colony

Do patterns hold?

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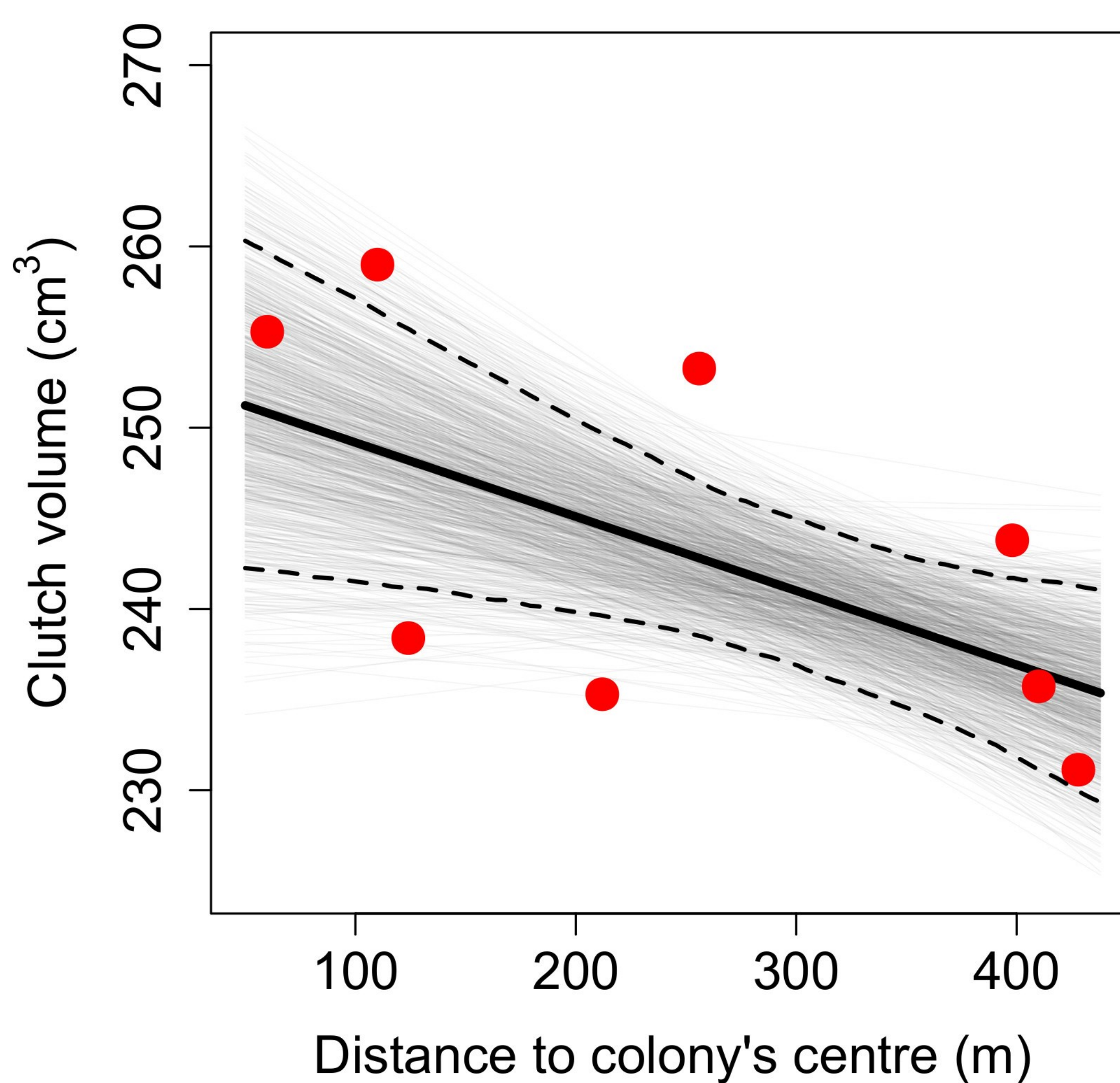
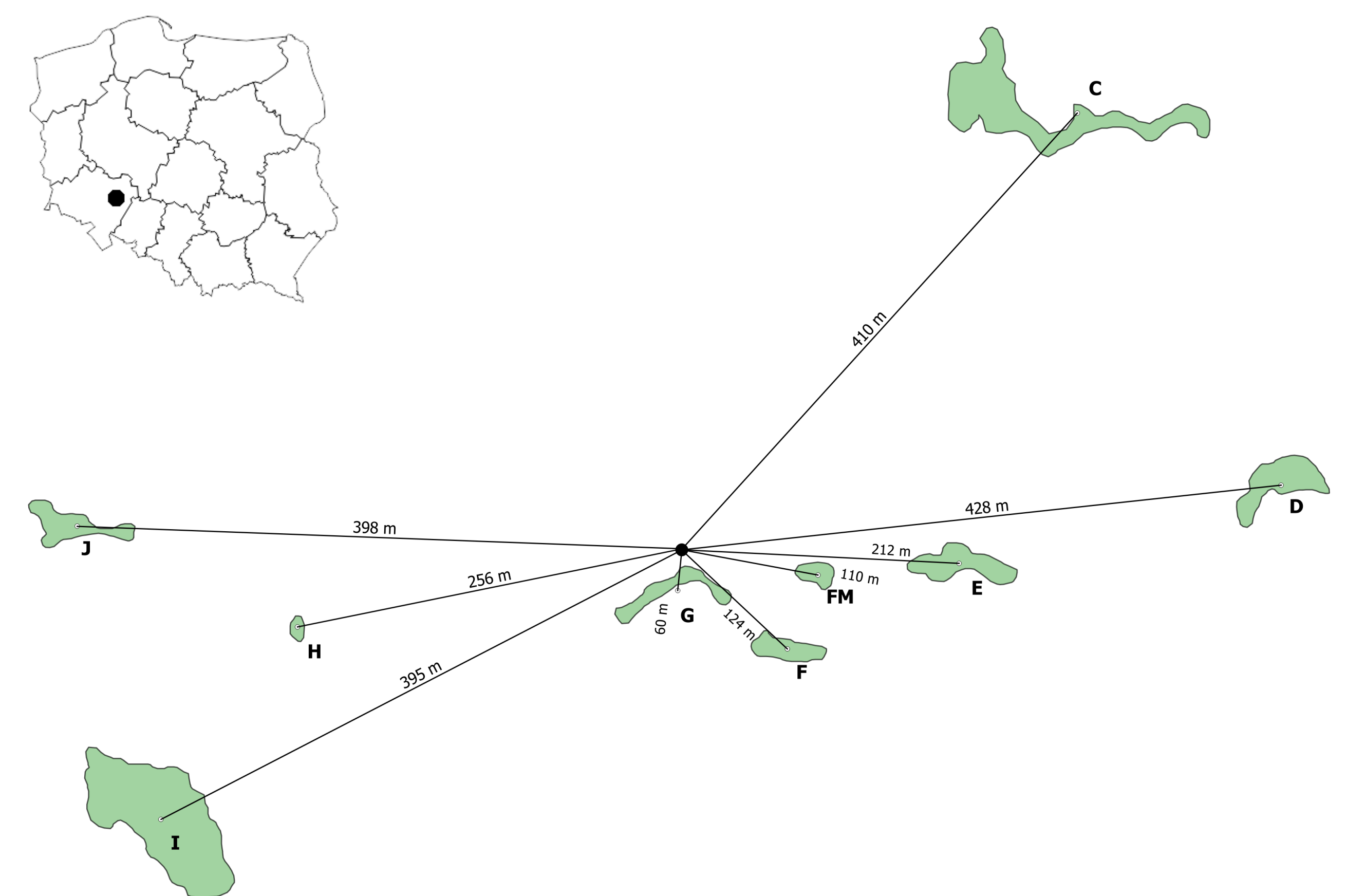


In homogeneous colonies: individuals of higher quality occupy the best central sites and lower quality ones less attractive edge sites.

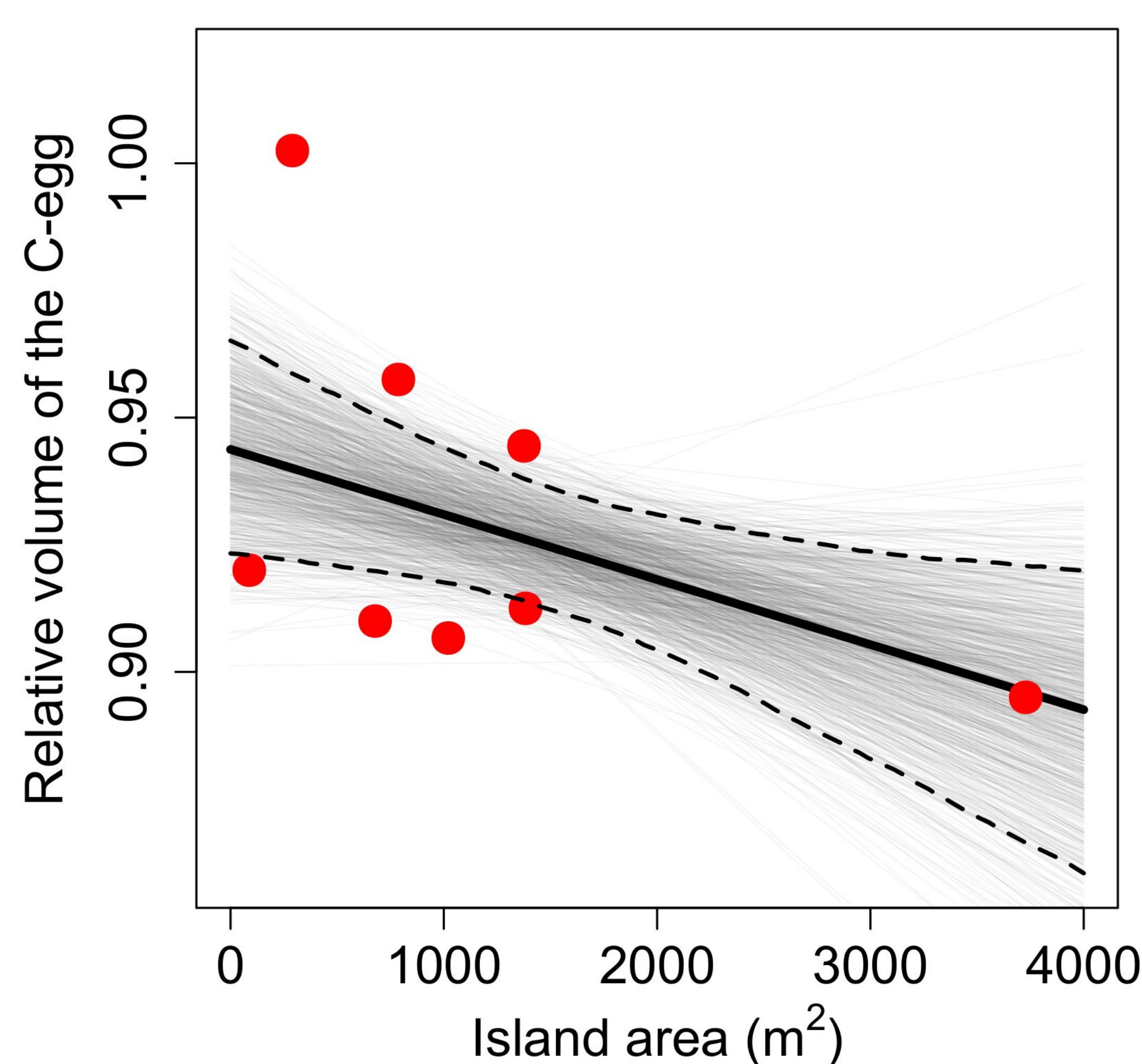
starring: **Caspian Gull** *Larus cachinnans*

During the season of 2019, gulls chose to nest nine small islands of different areas and distance from the centre of colony.

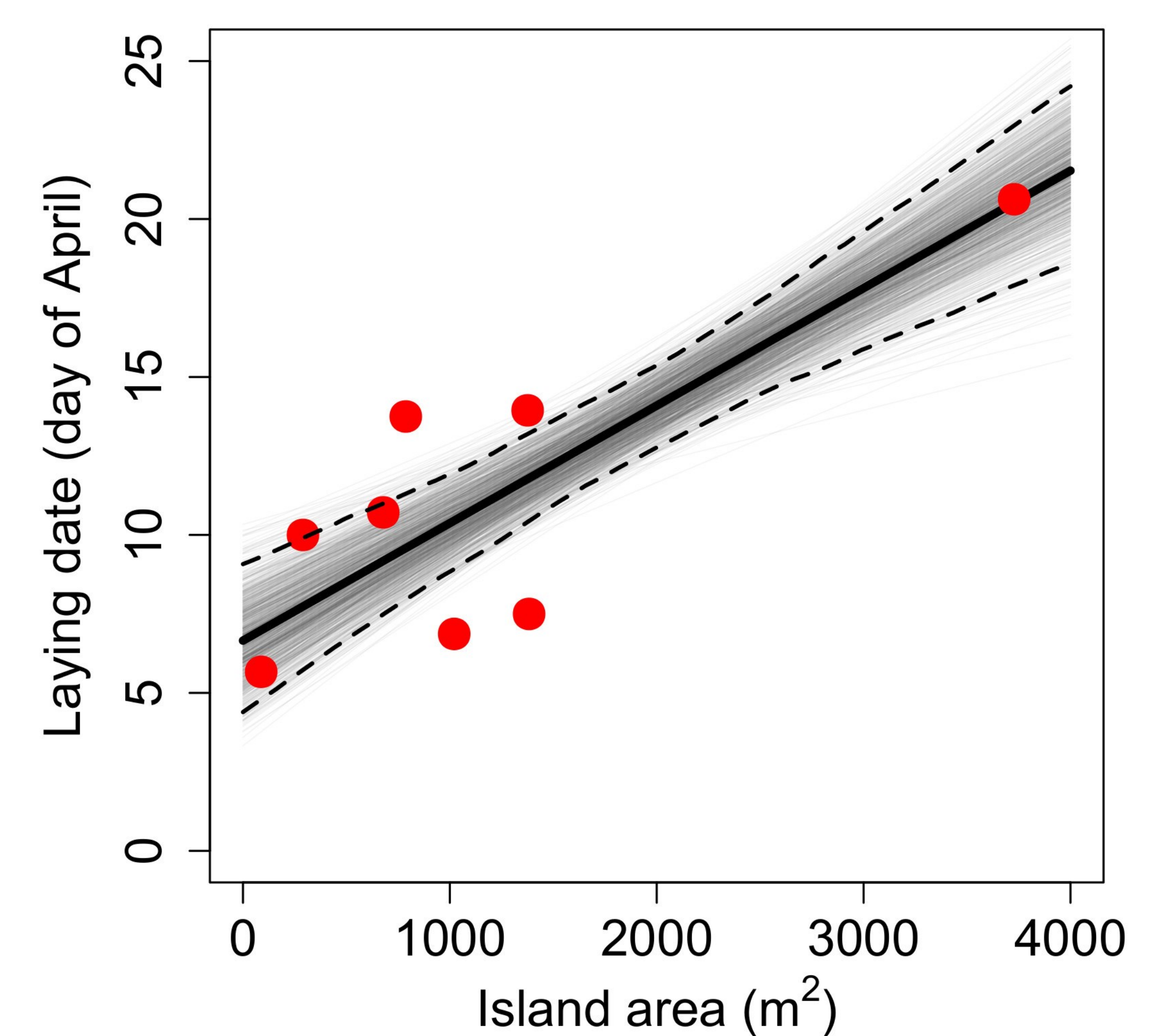
Fieldwork: egg measurements and laying dates



Relationship between the full clutch volume (cm³) and the distance to colony's centre under the top-supported model.



Relationship between the relative C-egg volume (proportion of A- and B-eggs) and island area under the top-supported model.



Relationship between the laying date (A-egg) and island area under the top-supported model.

Bold line – mean, dashed lines – 95% confidence intervals. Red dots show mean response values for all clutches on each island

Support for:

- distance effect on full clutch volume (the bigger the distance, the smaller clutch volume)
- island area effect on relative C-egg volume (the bigger the island, the smaller C egg)
- island area effect on laying date (the bigger the island, the later laying date)